*Presence*PLUS P4 Sealed OMNI

OMNI, OMNI 1.3 and Color OMNI

Features

- Ruggedized housing and connectors
- Washdown rating of IEC IP68
- Available for standard, high-resolution 1.3 megapixel, and Color OMNI
- Supports wide range of lighting
- Supports standard C-mount lenses
- Choice of lens enclosure or integrated IP68 Ring Light LED..R90S Series
- Supports Banner Engineering's standard *Presence*PLUS user interface, image processing, and communications

**Optional Lens Enclosure shown
mounted on camera**

Models

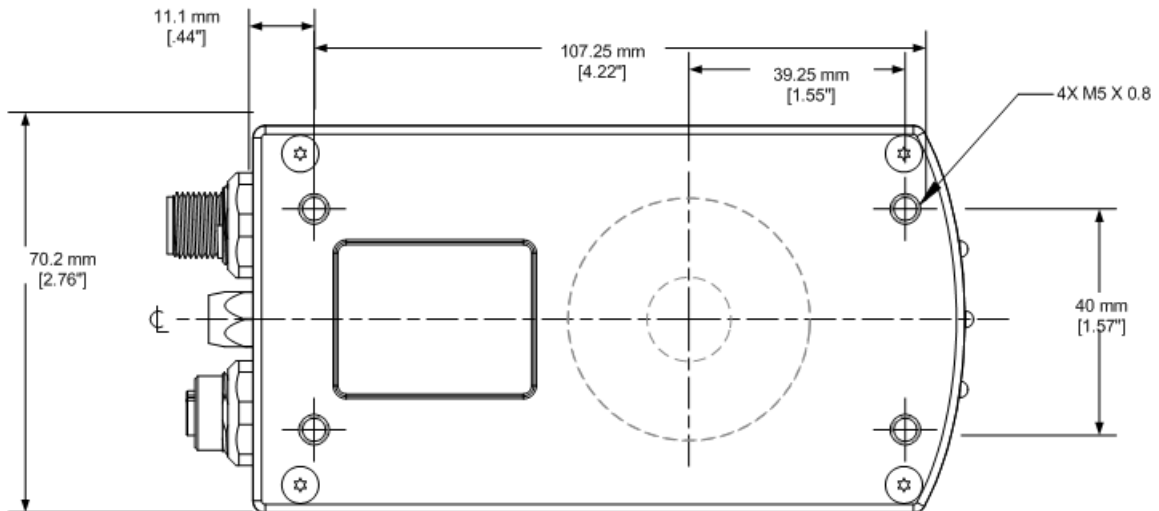| Model	Description
P4ORS	P4 Omni Right Angle — IP68 640x480 gray scale
P4O1.3RS	P4 Omni 1.3 Megapixel Right Angle — IP68 1280x1024 gray scale
P4CORS	P4 Color Omni Right Angle — IP68 752x480 color and gray scale

☞ **Note:** Models require a Lens Enclosure or Integrated Ring Light, which are available separately.
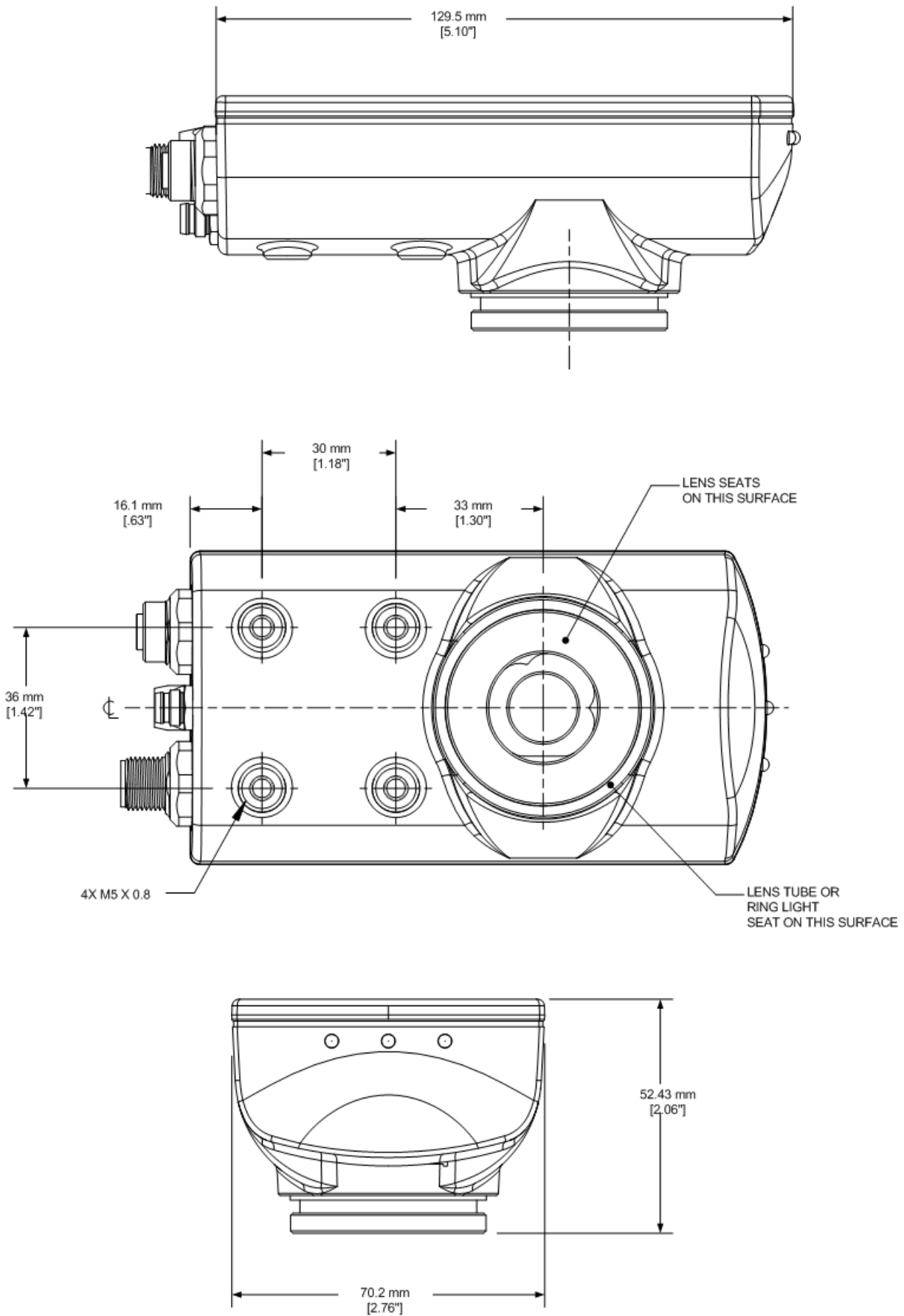
Specifications

Feature	Description
Power	**Voltage:** 10-30V dc (24V dc ± 10% if a light source is powered by the Sensor)
	Current: P4 OMNI: 650 mA maximum (exclusive of I/O load and lights)
	Current: P4 Color OMNI: 550 mA maximum (exclusive of I/O load and lights)
	Current: P4 OMNI 1.3: 550 mA maximum (exclusive of I/O load and lights)
Discrete I/O	1 Trigger IN
	1 Strobe OUT
	4 Programmable I/O
	1 Product Change
	1 Remote Teach
Input/Output Configuration	NPN or PNP software selectable
Output Rating	150 mA
	ON-State Saturation Voltage: <1V at 150 mA max. NpN;
	OFF-State Leakage Current: <100 microamps NPN or PNP
Communication	1 RJ-45 Ethernet
	RS-232 flying leads
Display Options	PC or NTSC video; 9 m (30') max. cable length
Memory	**INS Storage Memory:** 32 MB
	Number of INS Files: 999
Acquisition	

Camera	Frames Per Second	Image Size (pixels)
P4 OMNI	48 max.	640 X 480
P4 OMNI 1.3	26.8 max.	1280 X 1024
P4 Color OMNI	17 max.	752 X 480

Levels of Gray Scale: 256

Color OMNI: 256 Red, Green and Blue

Exposure Time	**P4 OMNI:** 0.1 to 2830 ms
	P4 OMNI 1.3: 0.1 to 1670 ms
	P4 Color OMNI: 0.1 to 1000 ms
Imager	**P4 OMNI:** 4.736 X 3.552 mm, 5.900 mm diagonal (1/3 inch CCD)
	P4 OMNI 1.3: 8.576 X 6.861 mm, 10.9829 mm diagonal (2/3 inch CMOS)
	P4 Color OMNI: 4.5 X 2.9 mm, 5.4 mm diagonal (1/3 inch CMOS)
Pixel Size	**P4 OMNI:** 7.4 X 7.4 microns
	P4 OMNI 1.3: 6.7 X 6.7 microns

Feature	Description
	P4 Color OMNI: 6.0 X 6.0 microns
Lens Mount	C-mount
Construction	Die-cast nickle-plated aluminum sensor housing, glass or acrylic window.
	Weight: Approximately 0.43 kg (0.95 lb.)
Environmental Rating	IEC IP68
Operating Conditions	**Stable Ambient Temperature:** 0° to + 50° C (+32° to + 122° F)
	Stable Ambient Lighting: No large, quick changes in light level; no direct or reflected sunlight
Certifications	$C\epsilon$ **IEC IP68**

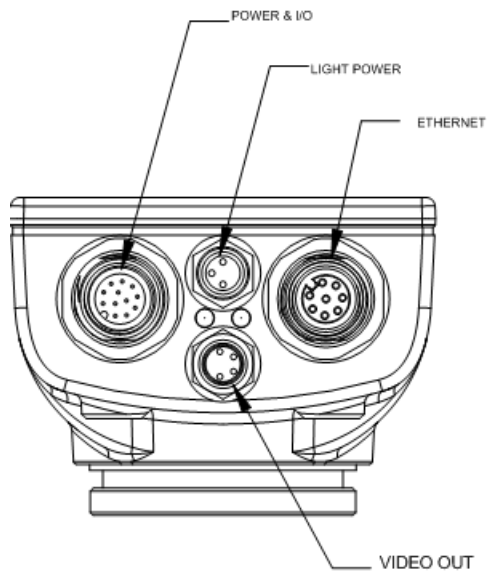# Dimensions

129.5 mm
[5.10"]

30 mm
[1.18"]

16.1 mm
[.63"]

33 mm
[1.30"]

LENS SEATS
ON THIS SURFACE

36 mm
[1.42"]

℄

4X M5 X 0.8

LENS TUBE OR
RING LIGHT
SEAT ON THIS SURFACE

52.43 mm
[2.06"]

70.2 mm
[2.76"]

Cable Connections

Figure 1: Cable Connections
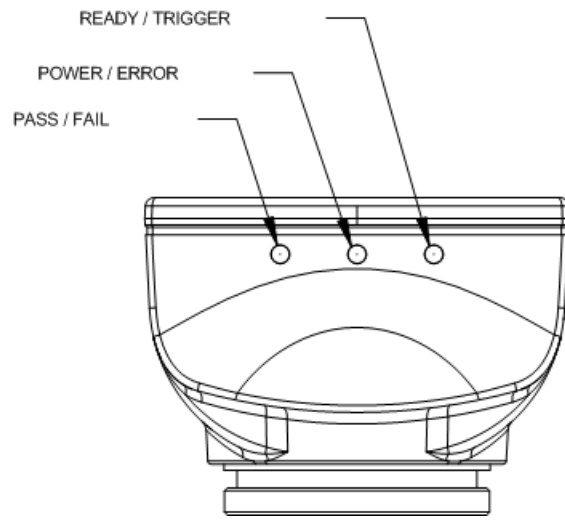
Figure 2: LED Indicators

Power and I/O Pinouts

Pin #	Wire Color	Description	Direction
1	White	Discrete I/O #3	In/Out
2	Brown	+10-30V dc	Input
3	Green	RS-232 Ground**	Output
4	Yellow	RS-232 Transmit**	Output
5	Gray	Remote Teach	Input
6	Pink	Trigger	Output
7	Blue	-10-30V dc	Input
8	Red	Discrete I/O #2	In/Out
9	Orange	Product Change	Input
10	Light Blue	Discrete I/O #4	In/Out
11	Black	Discrete I/O #1	In/Out
12	Violet	RS-232 Receive**	Input
Shield	Bare Metal	Chassis Ground	

** These three wires make up the RS-232 serial connection.

☞ **Note:** All unused inputs and outputs should be connected to ground if configured as PNP, and connected to +24V dc if configured as NPN. Serial input pins should be connected to ground.

Cordsets

Power Cordsets		
Model	**Length**	**Description**
MQDC2S-1206	2 m (6')	I/O sealed high-flex cordset 12 flying leads
MQDC2S-1215	5 m (15')	I/O sealed high-flex cordset12 flying leads
MQDC2S-1230	9 m (30')	I/O sealed high-flex cordset 12 flying leads
MQDC2S-1250	16 m (50')	I/O sealed high-flex cordset 12 flying leads

Camera to IP68 Ring Light Cordsets		
Model	**Length**	**Description**
PKG3M-35-PSG3M	350 mm (14")	Cordset from Camera to IP68 Ring Light, 3-pin male/female Pico connector
PKG3M-2-PSG3M	2 m (6')	Cordset from Camera to external light splitter cable 3-pin male/female Pico connector

Ethernet Cordsets		
Model	**Length**	**Description**
STP-MAQDC-806	2 m (6')	Straight Ethernet Cordset (For use with a hub)
STP-MAQDC-815	5 m (15')	Straight Ethernet Cordset (For use with a hub)
STP-MAQDC-830	9 m (30')	Straight Ethernet Cordset (For use with a hub)

Video Cordsets		
Model	**Length**	**Description**
PKG4M-2/CS	2 m (6')	Video Cordset for use with PPM8
PKG4M-5/CS	5 m (15')	Video Cordset for use with PPM8
PKG4M-9/CS	9 m (30')	Video Cordset for use with PPM8

Mounting Bracket

Model	Mounting Bracket	Mounting Bracket and P4 OMNI
SMBP4SRAF		
	Bracket includes: • 4 stainless steel M5 mounting screws • Allen wrench	